

First Year Instruction
by
James Caristi
Valparaiso University

As one who has often taught CS 1&2 over the last 20 years, I've seen what I believe is a marked difference in the *volume* of things that students must assimilate. If you think back to the "old days", students learned a few simple types, one or two complex types (array and record), assignment statements, **if** statements, counted loops, branching statements, input and output, subprograms or procedures, and parameters. Everything else had to be constructed, and the focus was on being able to build an algorithm that would accomplish a task. The dreaded **FORMAT** statement was the hardest thing for people to learn to use. The result was that science and math majors usually had a pretty easy time of it. Consider now the following terms, which must be mastered by everyone in CS 1&2: abstraction, applets, applications, behavior, browsers, buffered readers, bytecode, casting, catch/throw exceptions, classes, copy versus alias, garbage, inheritance, objects, packages, streams, StringTokenizer, import, constructors, containers, encapsulation, HTML, immutable, instantiation, libraries, methods, modifiers, overloading, overriding methods, parse, private protected and public, references, state, static constants and methods, URLs, visibility, web pages, wrapper classes. These are *in addition to* all the earlier terms, and not including things that not everyone does, eg: AWT, threads, event-driven, polymorphism, and not counting the names of the plethora of methods from various classes (eg, charAt). By itself, not one of these things is difficult. But the sheer number of technical terms and jargon can make it difficult for many students to succeed. I have seen special problems for people who are not native speakers of English. It is my belief that we in the CS community have not been particularly sensitive to the problems caused by the quantity of technical terms and jargon our students are expected to master. We should develop strategies that deal with this.